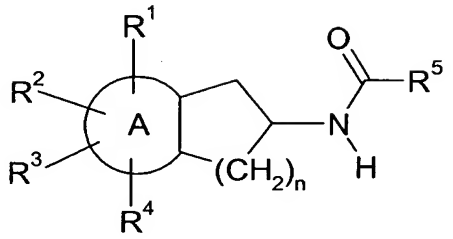
WHAT IS CLAIMED IS:

1. A compound of the formula I,



I

wherein:

the ring A, which comprises the two carbon atoms common to the ring A and the cycloalkenyl ring in formula I, is an aromatic 5-membered or 6-membered ring containing 1 or 2 nitrogen atoms as ring heteroatoms, or ring A is an aromatic 5-membered ring containing 1 ring heteroatom which is an oxygen atom or a sulfur atom or containing 2 ring heteroatoms one of which is a nitrogen atom and the other of which is an oxygen atom or a sulfur atom;

R^1 and R^4 are independently from each other:

H;

unsubstituted or substituted C_1-C_{10}-alkyl, unsubstituted or substituted C_2-C_{10}-alkenyl or unsubstituted or substituted C_2-C_{10}-alkynyl, the substituents of which are selected from the group consisting of F, OH, C_1-C_8-alkoxy, C_1-C_8-alkylmercapto, -CN, $COOR^6$, $CONR^7R^8$, and unsubstituted or substituted phenyl or unsubstituted or substituted heteroaryl where the substituents of the phenyl and heteroaryl group are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3;

unsubstituted or substituted phenyl or heteroaryl the substituents of which are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3;

COR^9; $CONR^{10}R^{11}$; $COOR^{12}$; CF_3; halogen; -CN; $NR^{13}R^{14}$; OR^{15}; $S(O)_mR^{16}$; $SO_2NR^{17}R^{18}$; or

NO_2;

provided that, when R^1 or R^4, in each case, is bonded to a ring nitrogen atom, then R^1 or R^4, in each case, is other than halogen, -CN or NO_2;

R^2 and R^3 are independently from each other:

H; halogen;

unsubstituted or substituted C_1-C_{10}-alkyl the substituents of which are selected from the group consisting of OH, phenyl, and heteroaryl;

OH; C_1-C_{10}-alkoxy; phenoxy; $S(O)_mR^{19}$; CF_3; -CN; NO_2; C_1-C_{10}-alkylamino; di(C_1-C_{10}-alkyl)amino; (C_1-C_6-alkyl)-CONH-;

unsubstituted or substituted phenyl-CONH- or unsubstituted or substituted phenyl-SO_2-O- the substituents of which are selected from the group consisting of halogen, -CN, methyl and methoxy;

C_1-C_6-alkyl-SO_2-O-;

unsubstituted or substituted (C_1-C_6-alkyl)-CO- the substituents of which are selected from the group consisting of F, di(C_1-C_3-alkyl)amino, pyrrolidinyl and piperidinyl; or

phenyl-CO- the phenyl part of which is unsubstituted or substituted by substituents selected from the group consisting of C_1-C_3-alkyl, halogen and methoxy;

provided that, when R^2 or R^3, in each case, is bonded to a ring nitrogen atom, then R^2 or R^3, in each case, is other than halogen, -CN or NO_2;

provided that, when A is a 6-membered aromatic ring, then two or three of the groups R^1, R^2, R^3 and R^4 are present and are bonded to the carbon atoms in the ring A which are not shared with the cycloalkenyl ring of formula I, and provided that when A is a 5-membered aromatic ring, then one, two or three of the groups R^1, R^2, R^3 and R^4 are present and are bonded to the carbon atoms in the ring A which are not shared with the cycloalkenyl ring of formula I, and, when ring A is a pyrrole, pyrazole or imidazole ring, to one ring nitrogen;

R^5 is a group Ar or a group Hetar each of which is unsubstituted or carries one or more identical or different substituents selected from the group consisting of:

halogen; -CN; NH_2;

unsubstituted or substituted C_1-C_{10}-alkyl, unsubstituted or substituted C_2-C_{10}-alkenyl, unsubstituted or substituted C_2-C_{10}-alkynyl, unsubstituted or substituted C_1-C_{10}-alkoxy, unsubstituted or substituted C_1-C_{10}-alkylamino and unsubstituted or substituted di(C_1-C_{10}-alkyl)amino, the substituents of each of which are selected from the group consisting of F, OH, C_1-C_8-alkoxy, aryloxy, C_1-C_8-alkylmercapto, NH_2, C_1-C_8-alkylamino and di(C_1-C_8-alkyl)amino;

C_3-C_5-alkandiyl; phenyl; heteroaryl; aryl-substituted or heteroaryl-substituted C_1-C_4-alkyl; CF_3; NO_2; OH; phenoxy; benzyloxy; (C_1-C_{10}-alkyl)-COO-; $S(O)_mR^{20}$; SH; phenylamino; benzylamino; (C_1-C_{10}-alkyl)-CONH-; (C_1-C_{10}-alkyl)-CO-N(C_1-C_4-alkyl)-; phenyl-CONH-; phenyl-CO-N(C_1-C_4-alkyl)-; heteroaryl-CONH-; heteroaryl-CO-N(C_1-C_4-alkyl)-; (C_1-C_{10}-alkyl)-CO-; phenyl-CO-; heteroaryl-CO-; CF_3-CO-; $-OCH_2O-$; $-OCF_2O-$; $-OCH_2CH_2O-$; $-CH_2CH_2O-$; $COOR^{21}$; $CONR^{22}R^{23}$; C(NH)-NH_2; $SO_2NR^{24}R^{25}$; $R^{26}SO_2NH$-; $R^{27}SO_2N(C_1$-C_6-alkyl)-; or

a residue of a saturated or at least monounsaturated aliphatic, monocyclic 5- membered to 7-membered heterocycle containing 1, 2 or 3 heteroatoms selected from the group consisting of N, O and S, which heterocycle can be substituted by one or more substituents selected from the group consisting of halogen, C_1-C_3-alkyl, C_1-C_3-alkoxy, OH, oxo and CF_3, where said heterocycle can optionally be condensed to the said group Ar or the said group Hetar;

wherein all aryl, heteroaryl, phenyl, aryl-containing, heteroaryl-containing and phenyl-containing groups, which are optionally present in the said substituents of the said group Ar or the said group Hetar, can be substituted by one or more substituents selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, OH, C_1-C_3-alkoxy, and CF_3;

R^6 is

H;

C_1-C_{10}-alkyl which can be substituted by one or more substituents selected from the group consisting of F, C_1-C_8-alkoxy and di(C_1-C_8-alkyl)amino;

aryl-(C_1-C_4-alkyl)- or heteroaryl-(C_1-C_4-alkyl)- each of which can be substituted by one or more substituents selected from the group consisting of halogen, C_1-C_4-alkyl, C_1-C_4-alkoxy and di(C_1-C_6-alkyl)amino;

R^7 is

H;

C_1-C_{10}-alkyl which can be substituted by one or more substituents selected from the group consisting of F, C_1-C_8-alkoxy, di(C_1-C_8-alkyl)amino and phenyl;

phenyl; indanyl; or heteroaryl;

wherein each of the aromatic groups can be unsubstituted or carry one or more substituents selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3;

R^8 is H or C_1-C_{10}-alkyl;

R^9 is

C_1-C_{10}-alkyl which can be substituted by one or more substituents selected from the group consisting of F, C_1-C_4-alkoxy and di(C_1-C_3-alkyl)amino; or

unsubstituted or substituted phenyl or unsubstituted or substituted heteroaryl the substituents of each of which are selected from the group consisting of C_1-C_3-alkyl, C_1-C_3-alkoxy, halogen, -CN and CF_3;

R^{10}, independently from R^7, is R^7;

R^{11}, independently from R^8, is R^8;

R^{12}, independently from R^6, is R^6;

R^{13} is

H; C_1-C_6-alkyl;

unsubstituted or substituted phenyl, unsubstituted or substituted benzyl, unsubstituted or substituted heteroaryl, unsubstituted or substituted (C_1-C_6-alkyl)-

CO-, unsubstituted or substituted phenyl-CO-, or unsubstituted or substituted heteroaryl-CO-, the substituents of each of which are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3, wherein one or more of these substituents can be present;

R^{14}, independently from R^{13}, is R^{13};

R^{15} is

H; C_1-C_{10}-alkyl; (C_1-C_3-alkoxy)-C_1-C_3-alkyl-; or

substituted or unsubstituted benzyl, substituted or unsubstituted phenyl or substituted or unsubstituted heteroaryl, the substituents of each of which are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3, wherein one or more of these substituents can be present;

R^{16} is

C_1-C_{10}-alkyl which can be substituted by one or more substituents selected from the group consisting of F, OH, C_1-C_8-alkoxy, aryloxy, C_1-C_8-alkylmercapto, C_1-C_8-alkylamino and di(C_1-C_8-alkyl)amino;

CF_3; or

substituted or unsubstituted phenyl or substituted or unsubstituted heteroaryl, the substituents of which are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3, wherein one or more of these substituents can be present;

R^{17}, independently from R^7, is R^7;

R^{18}, independently from R^8, is R^8;

R^{19}, independently from R^{16}, is R^{16};

R^{20}, independently from R^{16}, is R^{16};

R^{21}, independently from R^6, is R^6;

R^{22}, independently from R^7, is R^7;

R^{23}, independently from R^8, is R^8;

R^{24}, independently from R^7, is R^7;

R^{25}, independently from R^8, R^8;

R^{26}, independently from R^{16}, is R^{16};

R^{27}, independently from R^{16}, is R^{16};

heteroaryl is a residue of a 5-membered to 10-membered, aromatic, monocyclic or bicyclic heterocycle containing one or more heteroatoms selected from the group consisting of N, O and S;

the group Hetar is a residue of a 5-membered to 10-membered, aromatic, monocyclic or bicyclic heterocycle containing one or more heteroatoms selected from the group consisting of N, O and S;

aryl is phenyl, naphth-1-yl or naphth-2-yl;

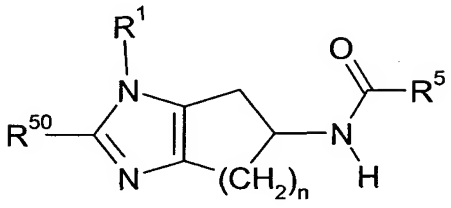
the group Ar is phenyl, naphth-1-yl or naphth-2-yl;

m is 0, 1 or 2;

n is 1, 2 or 3; or

a stereoisomer or a mixture of stereoisomers of such compound in any ratio, or a pharmaceutically acceptable salt of such compound, stereoisomer or mixture;

provided that when the compound of the formula I is the compound of the formula



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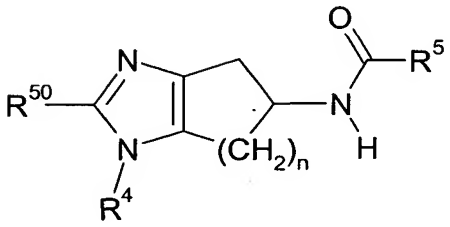
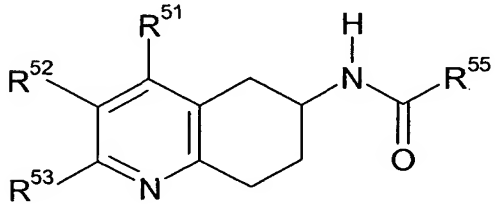


then R^{50} is other than hydrogen, unsubstituted C_1-C_6-alkyl, C_1-C_6-alkoxy, unsubstituted C_1-C_6-alkylthio, halogen, -CN, CF_3, OH, amino, C_1-C_6-alkylamino or di(C_1-C_6-alkyl)amino;

and provided that when the compound of formula I is the compound of the formula



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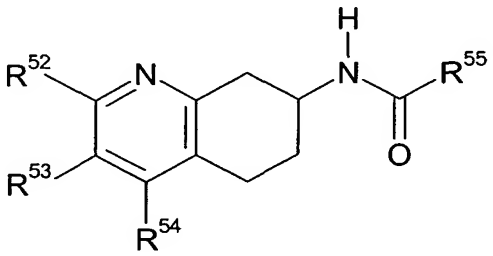


then R^{51}, R^{52}, R^{53} and R^{54} are other than hydrogen, unsubstituted or hydroxy-substituted C_1-C_6-alkyl, halogen, amino, C_1-C_6-alkylamino or di(C_1-C_6-alkyl)amino and R^{55} is other than unsubstituted or substituted phenyl, thienyl, furyl, pyrrolyl or oxazolyl;

and provided that the compound of formula I is other than N-(2-amino-5,6,7,8-tetrahydro-4-hydroxyquinazolin-6-yl)-3,4-dichlorobenzamide.

2. A compound according to claim 1 wherein the ring A is an aromatic 6-membered ring containing 1 or 2 nitrogen atoms as ring heteroatoms.

3. A compound according to claim 1 wherein the ring A is an aromatic 5-membered ring containing a sulfur atom as ring heteroatom or a sulfur atom and a nitrogen atom as ring heteroatoms.

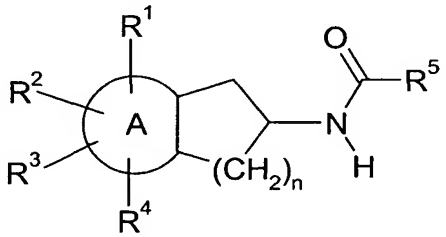
4. A compound according to claim 1 wherein n is 1.

5. A compound according to claim 1 wherein n is 3.

6. A compound according to claim 1, wherein R^1 and R^4 are independently from one another selected from the group consisting of H, C_1-C_4-alkyl and halogen and the residues R^2 and R^3 are independently from one another selected from the group consisting of H, C_1-C_4-alkyl and halogen.

7. A pharmaceutical preparation, comprising an pharmaceutically effective amount of a compound according to claim 1 and a pharmaceutically acceptable carrier.

8. A method for the stimulation of the expression of endothelial NO synthase, in a patient in need thereof, comprising administering to such patient a pharmaceutically effective amount of a compound of the formula I,



I

wherein:

the ring A, which comprises the two carbon atoms common to the ring A and the cycloalkenyl ring in formula I, is an aromatic 5-membered or 6-membered ring

containing 1 or 2 nitrogen atoms as ring heteroatoms, or ring A is an aromatic 5-membered ring containing 1 ring heteroatom which is an oxygen atom or a sulfur atom or containing 2 ring heteroatoms one of which is a nitrogen atom and the other of which is an oxygen atom or a sulfur atom;

R^1 and R^4 are independently from each other:

H;

unsubstituted or substituted C_1-C_{10}-alkyl, unsubstituted or substituted C_2-C_{10}-alkenyl or unsubstituted or substituted C_2-C_{10}-alkynyl, the substituents of which are selected from the group consisting of F, OH, C_1-C_8-alkoxy, C_1-C_8-alkylmercapto, -CN, $COOR^6$, $CONR^7R^8$, and unsubstituted or substituted phenyl or unsubstituted or substituted heteroaryl where the substituents of the phenyl and heteroaryl group are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3;

unsubstituted or substituted phenyl or heteroaryl the substituents of which are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3;

COR^9; $CONR^{10}R^{11}$; $COOR^{12}$; CF_3; halogen; -CN; $NR^{13}R^{14}$; OR^{15}; $S(O)_mR^{16}$; $SO_2NR^{17}R^{18}$; or

NO_2;

provided that, when R^1 or R^4, in each case, is bonded to a ring nitrogen atom, then R^1 or R^4, in each case, is other than halogen, -CN or NO_2;

R^2 and R^3 are independently from each other:

H; halogen;

unsubstituted or substituted C_1-C_{10}-alkyl the substituents of which are selected from the group consisting of OH, phenyl, and heteroaryl;

OH; C_1-C_{10}-alkoxy; phenoxy; $S(O)_mR^{19}$; CF_3; -CN; NO_2; C_1-C_{10}-alkylamino; di(C_1-C_{10}-alkyl)amino; (C_1-C_6-alkyl)-CONH-;

unsubstituted or substituted phenyl-CONH- or unsubstituted or substituted phenyl-SO_2-O- the substituents of which are selected from the group consisting of halogen, -CN, methyl and methoxy;

C_1-C_6-alkyl-SO_2-O-;

unsubstituted or substituted (C_1-C_6-alkyl)-CO- the substituents of which are selected from the group consisting of F, di(C_1-C_3-alkyl)amino, pyrrolidinyl and piperidinyl; or

phenyl-CO- the phenyl part of which is unsubstituted or substituted by substituents selected from the group consisting of C_1-C_3-alkyl, halogen and methoxy;

provided that, when R^2 or R^3, in each case, is bonded to a ring nitrogen atom, then R^2 or R^3, in each case, is other than halogen, -CN or NO_2;

provided that, when A is a 6-membered aromatic ring, then two or three of the groups R^1, R^2, R^3 and R^4 are present and are bonded to the carbon atoms in the ring A which are not shared with the cycloalkenyl ring of formula I, and provided that when A is a 5-membered aromatic ring, then one, two or three of the groups R^1, R^2, R^3 and R^4 are present and are bonded to the carbon atoms in the ring A which are not shared with the cycloalkenyl ring of formula I, and, when ring A is a pyrrole, pyrazole or imidazole ring, to one ring nitrogen;

R^5 is a group Ar or a group Hetar each of which is unsubstituted or carries one or more identical or different substituents selected from the group consisting of:

halogen; -CN; NH_2;

unsubstituted or substituted C_1-C_{10}-alkyl, unsubstituted or substituted C_2-C_{10}-alkenyl, unsubstituted or substituted C_2-C_{10}-alkynyl, unsubstituted or substituted C_1-C_{10}-alkoxy, unsubstituted or substituted C_1-C_{10}-alkylamino and unsubstituted or substituted di(C_1-C_{10}-alkyl)amino, the substituents of each of which are selected from the group consisting of F, OH, C_1-C_8-alkoxy, aryloxy, C_1-C_8-alkylmercapto, NH_2, C_1-C_8-alkylamino and di(C_1-C_8-alkyl)amino;

C_3-C_5-alkandiyl; phenyl; heteroaryl; aryl-substituted or heteroaryl-substituted C_1-C_4-alkyl; CF_3; NO_2; OH; phenoxy; benzyloxy; (C_1-C_{10}-alkyl)-COO-; $S(O)_mR^{20}$; SH; phenylamino; benzylamino; (C_1-C_{10}-alkyl)-CONH-; (C_1-C_{10}-alkyl)-CO-N(C_1-C_4-alkyl)-;

phenyl-CONH-; phenyl-CO-N(C_1-C_4-alkyl)-; heteroaryl-CONH-; heteroaryl-CO-N(C_1-C_4-alkyl)-; (C_1-C_{10}-alkyl)-CO-; phenyl-CO-; heteroaryl-CO-; CF_3-CO-; -OCH_2O-; -OCF_2O-; -OCH_2CH_2O-; -CH_2CH_2O-; $COOR^{21}$; $CONR^{22}R^{23}$; C(NH)-NH_2; $SO_2NR^{24}R^{25}$; $R^{26}SO_2NH$-; $R^{27}SO_2N$(C_1-C_6-alkyl)-; or

a residue of a saturated or at least monounsaturated aliphatic, monocyclic 5-membered to 7-membered heterocycle containing 1, 2 or 3 heteroatoms selected from the group consisting of N, O and S, which heterocycle can be substituted by one or more substituents selected from the group consisting of halogen, C_1-C_3-alkyl, C_1-C_3-alkoxy, OH, oxo and CF_3, where said heterocycle can optionally be condensed to the said group Ar or the said group Hetar;

wherein all aryl, heteroaryl, phenyl, aryl-containing, heteroaryl-containing and phenyl-containing groups, which are optionally present in the said substituents of the said group Ar or the said group Hetar, can be substituted by one or more substituents selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, OH, C_1-C_3-alkoxy, and CF_3;

R^6 is

H;

C_1-C_{10}-alkyl which can be substituted by one or more substituents selected from the group consisting of F, C_1-C_8-alkoxy and di(C_1-C_8-alkyl)amino;

aryl-(C_1-C_4-alkyl)- or heteroaryl-(C_1-C_4-alkyl)- each of which can be substituted by one or more substituents selected from the group consisting of halogen, C_1-C_4-alkyl, C_1-C_4-alkoxy and di(C_1-C_6-alkyl)amino;

R^7 is

H;

C_1-C_{10}-alkyl which can be substituted by one or more substituents selected from the group consisting of F, C_1-C_8-alkoxy, di(C_1-C_8-alkyl)amino and phenyl;

phenyl; indanyl; or heteroaryl;

wherein each of the aromatic groups can be unsubstituted or carry one or more substituents selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3;

R^8 is H or C_1-C_{10}-alkyl;

R^9 is

C_1-C_{10}-alkyl which can be substituted by one or more substituents selected from the group consisting of F, C_1-C_4-alkoxy and di(C_1-C_3-alkyl)amino; or

unsubstituted or substituted phenyl or unsubstituted or substituted heteroaryl the substituents of each of which are selected from the group consisting of C_1-C_3-alkyl, C_1-C_3-alkoxy, halogen, -CN and CF_3;

R^{10}, independently from R^7, is R^7;

R^{11}, independently from R^8, is R^8;

R^{12}, independently from R^6, is R^6;

R^{13} is

H; C_1-C_6-alkyl;

unsubstituted or substituted phenyl, unsubstituted or substituted benzyl, unsubstituted or substituted heteroaryl, unsubstituted or substituted (C_1-C_6-alkyl)-CO-, unsubstituted or substituted phenyl-CO-, or unsubstituted or substituted heteroaryl-CO-, the substituents of each of which are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3, wherein one or more of these substituents can be present;

R^{14}, independently from R^{13}, is R^{13};

R^{15} is

H; C_1-C_{10}-alkyl; (C_1-C_3-alkoxy)-C_1-C_3-alkyl-; or

substituted or unsubstituted benzyl, substituted or unsubstituted phenyl or substituted or unsubstituted heteroaryl, the substituents of each of which are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3, wherein one or more of these substituents can be present;

R^{16} is

C_1-C_{10}-alkyl which can be substituted by one or more substituents selected from the group consisting of F, OH, C_1-C_8-alkoxy, aryloxy, C_1-C_8-alkylmercapto, C_1-C_8-alkylamino and di(C_1-C_8-alkyl)amino;

CF_3; or

substituted or unsubstituted phenyl or substituted or unsubstituted heteroaryl, the substituents of which are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3, wherein one or more of these substituents can be present;

R^{17}, independently from R^7, is R^7;

R^{18}, independently from R^8, is R^8;

R^{19}, independently from R^{16}, is R^{16};

R^{20}, independently from R^{16}, is R^{16};

R^{21}, independently from R^6, is R^6;

R^{22}, independently from R^7, is R^7;

R^{23}, independently from R^8, is R^8;

R^{24}, independently from R^7, is R^7;

R^{25}, independently from R^8, R^8;

R^{26}, independently from R^{16}, is R^{16};

R^{27}, independently from R^{16}, is R^{16};

heteroaryl is a residue of a 5-membered to 10-membered, aromatic, monocyclic or bicyclic heterocycle containing one or more heteroatoms selected from the group consisting of N, O and S;

the group Hetar is a residue of a 5-membered to 10-membered, aromatic, monocyclic or bicyclic heterocycle containing one or more heteroatoms selected from the group consisting of N, O and S;

aryl is phenyl, naphth-1-yl or naphth-2-yl;

the group Ar is phenyl, naphth-1-yl or naphth-2-yl;

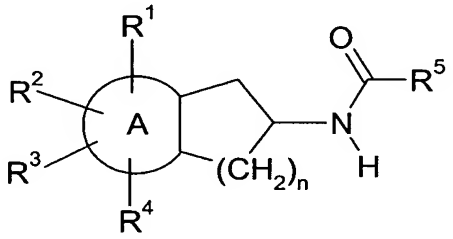
m is 0, 1 or 2;

n is 1, 2 or 3; or

a stereoisomer or a mixture of stereoisomers of such compound in any ratio, or a pharmaceutically acceptable salt of such compound, stereoisomer or mixture.

9. A method for the treatment of cardiovascular disease, stable or unstable angina pectoris, coronary heart disease, Prinzmetal angina, acute coronary syndrome, heart failure, myocardial infarction, stroke, thrombosis, peripheral artery occlusive disease, endothelial dysfunction, atherosclerosis, restenosis, endothel damage after PTCA, hypertension, essential hypertension, pulmonary hypertension, secondary hypertension, renovascular hypertension, chronic glomerulonephritis, erectile dysfunction, ventricular arrhythmia, diabetes, diabetes complications, nephropathy, retinopathy, angiogenesis, asthma bronchiale, chronic renal failure, cirrhosis of the

liver, osteoporosis, restricted memory performance or a restricted ability to learn, or for the lowering of cardiovascular risk of postmenopausal women or of women taking contraceptives, in a patient in need thereof, comprising administering to such patient a pharmaceutically effective amount of a compound of the formula I



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wherein:

the ring A, which comprises the two carbon atoms common to the ring A and the cycloalkenyl ring in formula I, is an aromatic 5-membered or 6-membered ring containing 1 or 2 nitrogen atoms as ring heteroatoms, or ring A is an aromatic 5-membered ring containing 1 ring heteroatom which is an oxygen atom or a sulfur atom or containing 2 ring heteroatoms one of which is a nitrogen atom and the other of which is an oxygen atom or a sulfur atom;

R^1 and R^4 are independently from each other:

H;

unsubstituted or substituted C_1-C_{10}-alkyl, unsubstituted or substituted C_2-C_{10}-alkenyl or unsubstituted or substituted C_2-C_{10}-alkynyl, the substituents of which are selected from the group consisting of F, OH, C_1-C_8-alkoxy, C_1-C_8-alkylmercapto, -CN, $COOR^6$, $CONR^7R^8$, and unsubstituted or substituted phenyl or unsubstituted or substituted heteroaryl where the substituents of the phenyl and heteroaryl group are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3;

unsubstituted or substituted phenyl or heteroaryl the substituents of which are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3;

COR^9; $CONR^{10}R^{11}$; $COOR^{12}$; CF_3; halogen; -CN; $NR^{13}R^{14}$; OR^{15}; $S(O)_mR^{16}$; $SO_2NR^{17}R^{18}$; or

NO_2;

provided that, when R^1 or R^4, in each case, is bonded to a ring nitrogen atom, then R^1 or R^4, in each case, is other than halogen, -CN or NO_2;

R^2 and R^3 are independently from each other:

H; halogen;

unsubstituted or substituted C_1-C_{10}-alkyl the substituents of which are selected from the group consisting of OH, phenyl, and heteroaryl;

OH; C_1-C_{10}-alkoxy; phenoxy; $S(O)_mR^{19}$; CF_3; -CN; NO_2; C_1-C_{10}-alkylamino; di(C_1-C_{10}-alkyl)amino; (C_1-C_6-alkyl)-CONH-;

unsubstituted or substituted phenyl-CONH- or unsubstituted or substituted phenyl-SO_2-O- the substituents of which are selected from the group consisting of halogen, -CN, methyl and methoxy;

C_1-C_6-alkyl-SO_2-O-;

unsubstituted or substituted (C_1-C_6-alkyl)-CO- the substituents of which are selected from the group consisting of F, di(C_1-C_3-alkyl)amino, pyrrolidinyl and piperidinyl; or

phenyl-CO- the phenyl part of which is unsubstituted or substituted by substituents selected from the group consisting of C_1-C_3-alkyl, halogen and methoxy;

provided that, when R^2 or R^3, in each case, is bonded to a ring nitrogen atom, then R^2 or R^3, in each case, is other than halogen, -CN or NO_2;

provided that, when A is a 6-membered aromatic ring, then two or three of the groups R^1, R^2, R^3 and R^4 are present and are bonded to the carbon atoms in the ring A which are not shared with the cycloalkenyl ring of formula I, and provided that when A is a 5-membered aromatic ring, then one, two or three of the groups R^1, R^2, R^3 and R^4 are present and are bonded to the carbon atoms in the ring A which are not shared with the cycloalkenyl ring of formula I, and, when ring A is a pyrrole, pyrazole or imidazole ring, to one ring nitrogen;

R^5 is a group Ar or a group Hetar each of which is unsubstituted or carries one or more identical or different substituents selected from the group consisting of:

halogen; -CN; NH_2;

unsubstituted or substituted C_1-C_{10}-alkyl, unsubstituted or substituted C_2-C_{10}-alkenyl, unsubstituted or substituted C_2-C_{10}-alkynyl, unsubstituted or substituted C_1-C_{10}-alkoxy, unsubstituted or substituted C_1-C_{10}-alkylamino and unsubstituted or substituted di(C_1-C_{10}-alkyl)amino, the substituents of each of which are selected from the group consisting of F, OH, C_1-C_8-alkoxy, aryloxy, C_1-C_8-alkylmercapto, NH_2, C_1-C_8-alkylamino and di(C_1-C_8-alkyl)amino;

C_3-C_5-alkandiyl; phenyl; heteroaryl; aryl-substituted or heteroaryl-substituted C_1-C_4-alkyl; CF_3; NO_2; OH; phenoxy; benzyloxy; (C_1-C_{10}-alkyl)-COO-; $S(O)_mR^{20}$; SH; phenylamino; benzylamino; (C_1-C_{10}-alkyl)-CONH-; (C_1-C_{10}-alkyl)-CO-N(C_1-C_4-alkyl)-; phenyl-CONH-; phenyl-CO-N(C_1-C_4-alkyl)-; heteroaryl-CONH-; heteroaryl-CO-N(C_1-C_4-alkyl)-; (C_1-C_{10}-alkyl)-CO-; phenyl-CO-; heteroaryl-CO-; CF_3-CO-; -OCH_2O-; -OCF_2O-; -OCH_2CH_2O-; -CH_2CH_2O-; $COOR^{21}$; $CONR^{22}R^{23}$; C(NH)-NH_2; $SO_2NR^{24}R^{25}$; $R^{26}SO_2NH$-; $R^{27}SO_2N(C_1$-C_6-alkyl)-; or

a residue of a saturated or at least monounsaturated aliphatic, monocyclic 5-membered to 7-membered heterocycle containing 1, 2 or 3 heteroatoms selected from the group consisting of N, O and S, which heterocycle can be substituted by one or more substituents selected from the group consisting of halogen, C_1-C_3-alkyl, C_1-C_3-alkoxy, OH, oxo and CF_3, where said heterocycle can optionally be condensed to the said group Ar or the said group Hetar;

wherein all aryl, heteroaryl, phenyl, aryl-containing, heteroaryl-containing and phenyl-containing groups, which are optionally present in the said substituents of the said group Ar or the said group Hetar, can be substituted by one or more substituents selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, OH, C_1-C_3-alkoxy, and CF_3;

R^6 is

H;

C_1-C_{10}-alkyl which can be substituted by one or more substituents selected from the group consisting of F, C_1-C_8-alkoxy and di(C_1-C_8-alkyl)amino;

aryl-(C_1-C_4-alkyl)- or heteroaryl-(C_1-C_4-alkyl)- each of which can be substituted by one or more substituents selected from the group consisting of halogen, C_1-C_4-alkyl, C_1-C_4-alkoxy and di(C_1-C_6-alkyl)amino;

R^7 is

H;

C_1-C_{10}-alkyl which can be substituted by one or more substituents selected from the group consisting of F, C_1-C_8-alkoxy, di(C_1-C_8-alkyl)amino and phenyl;

phenyl; indanyl; or heteroaryl;

wherein each of the aromatic groups can be unsubstituted or carry one or more substituents selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3;

R^8 is H or C_1-C_{10}-alkyl;

R^9 is

C_1-C_{10}-alkyl which can be substituted by one or more substituents selected from the group consisting of F, C_1-C_4-alkoxy and di(C_1-C_3-alkyl)amino; or

unsubstituted or substituted phenyl or unsubstituted or substituted heteroaryl the substituents of each of which are selected from the group consisting of C_1-C_3-alkyl, C_1-C_3-alkoxy, halogen, -CN and CF_3;

R^{10}, independently from R^7, is R^7;

R^{11}, independently from R^8, is R^8;

R^{12}, independently from R^6, is R^6;

R^{13} is

H; C_1-C_6-alkyl;

unsubstituted or substituted phenyl, unsubstituted or substituted benzyl, unsubstituted or substituted heteroaryl, unsubstituted or substituted (C_1-C_6-alkyl)-CO-, unsubstituted or substituted phenyl-CO-, or unsubstituted or substituted heteroaryl-CO-, the substituents of each of which are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3, wherein one or more of these substituents can be present;

R^{14}, independently from R^{13}, is R^{13};

R^{15} is

H; C_1-C_{10}-alkyl; (C_1-C_3-alkoxy)-C_1-C_3-alkyl-; or

substituted or unsubstituted benzyl, substituted or unsubstituted phenyl or substituted or unsubstituted heteroaryl, the substituents of each of which are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3, wherein one or more of these substituents can be present;

R^{16} is

C_1-C_{10}-alkyl which can be substituted by one or more substituents selected from the group consisting of F, OH, C_1-C_8-alkoxy, aryloxy, C_1-C_8-alkylmercapto, C_1-C_8-alkylamino and di(C_1-C_8-alkyl)amino;

CF_3; or

substituted or unsubstituted phenyl or substituted or unsubstituted heteroaryl, the substituents of which are selected from the group consisting of halogen, -CN, C_1-C_3-alkyl, C_1-C_3-alkoxy and CF_3, wherein one or more of these substituents can be present;

R^{17}, independently from R^7, is R^7;

R^{18}, independently from R^8, is R^8;

R^{19}, independently from R^{16}, is R^{16};

R^{20}, independently from R^{16}, is R^{16};

R^{21}, independently from R^{6}, is R^{6};

R^{22}, independently from R^{7}, is R^{7};

R^{23}, independently from R^{8}, is R^{8};

R^{24}, independently from R^{7}, is R^{7};

R^{25}, independently from R^{8}, R^{8};

R^{26}, independently from R^{16}, is R^{16};

R^{27}, independently from R^{16}, is R^{16};

heteroaryl is a residue of a 5-membered to 10-membered, aromatic, monocyclic or bicyclic heterocycle containing one or more heteroatoms selected from the group consisting of N, O and S;

the group Hetar is a residue of a 5-membered to 10-membered, aromatic, monocyclic or bicyclic heterocycle containing one or more heteroatoms selected from the group consisting of N, O and S;

aryl is phenyl, naphth-1-yl or naphth-2-yl;

the group Ar is phenyl, naphth-1-yl or naphth-2-yl;

m is 0, 1 or 2;

n is 1, 2 or 3; or

a stereoisomer or a mixture of stereoisomers of such compound in any ratio, or a pharmaceutically acceptable salt of such compound, stereoisomer or mixture.